

We claim:

1. A biomedical device formed from the polymerization product of a monomeric mixture comprising a poly(2-oxazoline) endcapped with an ethylenically unsaturated radical.

2. The device of claim 1, which is an ophthalmic lens.

3. The lens of claim 2, wherein the poly(2-oxazoline) is a macromonomer of the formula:

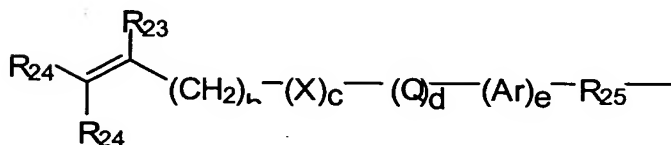


where R is a polymerizable, ethylenically unsaturated radical;

R' is selected from the group consisting of alkyl, haloalkyl, alkene, alkyne, cycloalkyl, halocycloalkyl, aryl, haloaryl, aralkyl and haloaralkyl; and

n is at least 2.

4. The lens of claim 3, wherein R is



wherein:

R₂₃ is hydrogen or methyl;

each R₂₄ is hydrogen, an alkyl radical having 1 to 6 carbon atoms, or a -CO-Y-R₂₆ radical wherein Y is -O-, -S- or -NH-;

R₂₅ is a single bond or a divalent alkylene radical having 1 to 10 carbon atoms;

R₂₆ is an alkyl radical having 1 to 12 carbon atoms;

X denotes -CO- or -OCO-;

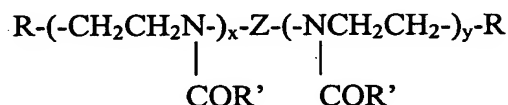
Q denotes -O- or -NH-;

Ar denotes an aromatic radical having 6 to 30 carbon atoms; b is 0 to 6; c is 0 or 1; d is 0 or 1; and e is 0 or 1.

5. The lens of claim 4, wherein R is selected from the group consisting of (meth)acrylate, (meth)acrylamide, allyl and styrene radicals.

6. The lens of claim 3, wherein R' is selected from the group consisting of C₁-C₆ alkyl and phenyl.

7. The lens of claim 2, wherein the poly(2-oxazoline) is a telechelic of the formula:



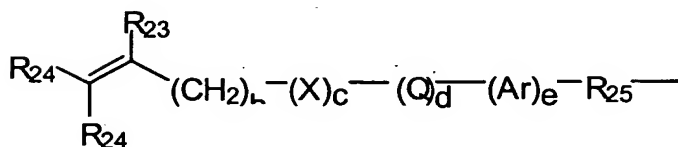
where each R is independently a polymerizable, ethylenically unsaturated radical;

each R' is independently selected from the group consisting of alkyl, haloalkyl, alkene, alkyne, cycloalkyl, halocycloalkyl, aryl, haloaryl, aralkyl and haloaralkyl;

Z is a divalent linkage; and

each of x and y is at least 1.

8. The lens of claim 7, wherein R is



wherein:

R₂₃ is hydrogen or methyl;

each R₂₄ is hydrogen, an alkyl radical having 1 to 6 carbon atoms, or a -CO-Y-

R₂₆ radical wherein Y is -O-, -S- or -NH-;

R₂₅ is a single bond or a divalent alkylene radical having 1 to 10 carbon atoms;

R₂₆ is an alkyl radical having 1 to 12 carbon atoms;

X denotes $\text{-}\overline{\text{CO}}\text{-}$ or -OCO- ;

Q denotes -O- or -NH- ;

Ar denotes an aromatic radical having 6 to 30 carbon atoms; b is 0 to 6; c is 0 or 1; d is 0 or 1; and e is 0 or 1.

9. The lens of claim 8, wherein R is selected from the group consisting of (meth)acrylate, (meth)acrylamide, allyl and styrene radicals.

10. The lens of claim 7, wherein R' is selected from the group consisting of C₁-C₆ alkyl and phenyl.

11. The lens of claim 7, wherein Z is selected from the group consisting of a single bond and C₁-C₆ alkylene optionally including ether linkages.

12. The lens of claim 2, wherein the monomeric mixture further comprises at least one hydrophilic monomer selected from the group consisting of ethylenically unsaturated carboxylic acids, (meth)acrylic substituted alcohols, vinyl lactams, and (meth)acrylamides.

13. The lens of claim 12, wherein the monomeric mixture comprises at least one hydrophilic monomer selected from the group consisting of (meth)acrylic acid, 2-hydroxyethyl(meth)acrylate, glyceryl(meth)acrylate, N-vinyl pyrrolidone, methacrylamide and N,N-dimethylacrylamide.

14. The lens of claim 2, wherein the monomeric mixture further comprises at least one silicone-containing monomer.

15. The lens of claim 14, wherein the monomeric mixture comprises at least one silicone-containing monomer selected from the group consisting of methacryloxypropyl

tris(trimethylsiloxy)silane, pentamethyldisiloxanyl methylmethacrylate,
tris(trimethylsiloxy) methacryloxy propylsilane, phenyltetramethyl-disiloxanylethyl
acrylate, methyldi(trimethylsiloxy)methacryloxymethyl silane, 3-
[tris(trimethylsiloxy)silyl] propyl vinyl carbamate, 3-[tris(trimethylsiloxy)silyl] propyl
allyl carbamate, and 3-[tris(trimethylsiloxy)silyl] propyl vinyl carbonate.

16. The lens of claim 2, which is a contact lens.
17. The lens of claim 2, which is a hydrogel contact lens.
18. The lens of claim 2, which is an intraocular lens.
19. The lens of claim 18, which is a hydrogel intraocular lens.